

REMARKS

In response to the Office Action mailed April 27, 2007, Applicant respectfully requests reconsideration. Claims 1, 3, 5-15, 18, 20-30, 33 and 35-42 were previously pending in this application. By this amendment, claims 1, 3, 5-8, 10, 11, 14, 15, 18, 20-23, 25, 26, 29, 30, 35 and 40 have been amended. As a result, claims 1, 3, 5-15, 18, 20-30, 33 and 35-42 are pending for examination with claims 1, 15 and 30 being independent. No new matter has been added.

Rejections under 35 U.S.C. §112

The Office Action rejected claims 1, 3, 5-15, 18, 20-30, 33 and 35-42 under 35 U.S.C. §112(1) as allegedly based on a disclosure which is not enabling. Applicant has amended claims 1, 3, 5-8, 10, 11, 14, 15, 18, 20-23, 25, 26, 29, 30, 35 and 40 to address the rejections.

Accordingly, withdrawal of these rejections is respectfully requested.

The Office Action rejected claims 5, 10, 11, 20, 25, 36, 35, 40 and 41 under 35 U.S.C. §112(1) as allegedly falling to comply with the enablement requirement. As discussed above, Applicant has amended claims 5-8, 10, 11, 14, 15, 18, 20-23, 25, 26, 29, 30, 35 to address the rejections.

Accordingly, withdrawal of these rejections is respectfully requested.

Claim Objections

The Office Action objected to claims 1, 3, 5-15, 18, 20-30, 33 and 35-42 as containing informalities. As discussed above, Applicant has amended claims 1, 3, 5-8, 10, 11, 14, 15, 18, 20-23, 25, 26, 29, 30, 35 and 40 to address the Examiner's concerns.

Accordingly, withdrawal of these objections is respectfully requested.

Rejections Under 35 U.S.C. §102

The Office Action rejected claims 1, 5, 6, 15, 20, 21, 30, 35 and 36 under 35 U.S.C. §102(b) as allegedly being anticipated by International Application Publication under PCT of Rosencwaig (WO95/00872), hereinafter Rosencwaig. Applicant respectfully disagrees. In addition, without

according to the appropriateness of the rejections, Applicant has amended claims 1, 3, 5-8, 10, 11, 14, 15, 18, 20-23, 25, 26, 29, 30, 35 and 40 to more clearly distinguish over the cited reference.

Claim 1, as amended, recites:

A three-dimensional image display device comprising:
an image display portion for displaying image information according to a parallax separately in a first segment and a second segment;
first polarization means for polarizing lights from said first and second segments, facing said image display portion;
polarization direction converting means provided so as to face at least said first segment of said image display portion for converting a polarization direction of polarized light of said image information from said first segment into a direction different from a polarization direction of polarized light of said image information from said second segment, wherein a portion of said polarization direction converting means facing said first segment comprises a wave plate filter including a first half-wave plate which rotates said polarization direction of said polarized light of said image information from said first segment by 90 degree;
second polarization means having a first polarization plate portion and a second polarization plate portion to which polarized lights separated by said polarization direction converting means are respectively input, said first polarization plate portion for viewing with one of right and left eyes, said second polarization plate portion for viewing with the other one of the right and the left eyes, said first polarization plate portion having a polarization direction so as to output said polarized light of said image information from said first segment, and said second polarization plate portion having a polarization direction so as to output said polarized light of said image information from said second segment;
a second half-wave plate provided over one of said first and second polarization plate portions of said second polarization means so as to face said first half-wave plate of said polarization direction converting means to rotate said polarization direction of said polarized light of said image information from said second segment by 90 degree, wherein said polarization direction of said polarized light of said image information from said second segment is the same as said polarization direction of polarized light passed through said second half-wave plate and said second polarization plate portion; and
a position holding mechanism for holding a positional relation between said second polarization means and said polarization direction converting means, *wherein said second polarization means is 180 degree horizontally rotatable so as to position said second half-wave plate facing said second segment.*

(Emphasis added).

Rosencwaig is directed to a passive stereoscopic vision system for a raster displayed image that includes two sets of passive filters (page 4, lines 30-32). A pair of glasses is positioned over the viewer's eyes including two lenses 140 and 146 (page 7, lines 14-15). So long as the viewer holds the glasses so that the liner polarizers 144 and 148 in the glasses (Figure 4) are perpendicular to the

liner polarizer 132 in the display filter, this system will prevent displaying the left image to the right eye and vice versa. Unfortunately, as the viewer's head is tilted, there will be degradation in the stereo separation and "cross-talk" will result between the separate images and the viewer's eyes (page 9, lines 10-18). Rosencwaig does not discuss polarization means that is rotatable. In contrast, claim 1, as amended, recites that "second polarization means is 180 degree horizontally rotatable so as to position said second half-wave plate facing said second segment."

Therefore, Rosencwaig neither discloses nor suggests "a three-dimensional image display device comprising: an image display portion for displaying image information according to a parallax separately in a first segment and a second segment; first polarization means for polarizing lights from said first and second segments, facing said image display portion; polarization direction converting means provided so as to face at least said first segment of said image display portion for converting a polarization direction of polarized light of said image information from said first segment into a direction different from a polarization direction of polarized light of said image information from said second segment, wherein a portion of said polarization direction converting means facing said first segment comprises a wave plate filter including a first half-wave plate which rotates said polarization direction of said polarized light of said image information from said first segment by 90 degree; second polarization means having a first polarization plate portion and a second polarization plate portion to which polarized lights separated by said polarization direction converting means are respectively input, said first polarization plate portion for viewing with one of right and left eyes, said second polarization plate portion for viewing with the other one of the right and the left eyes, said first polarization plate portion having a polarization direction so as to output said polarized light of said image information from said first segment, and said second polarization plate portion having a polarization direction so as to output said polarized light of said image information from said second segment; a second half-wave plate provided over one of said first and second polarization plate portions of said second polarization means so as to face said first half-wave plate of said polarization direction converting means to rotate said polarization direction of said polarized light of said image information from said second segment by 90 degree, wherein said polarization direction of said polarized light of said image information from said second segment is the same as said polarization direction of polarized light passed through said second half-wave plate and said second polarization plate portion; and a position holding mechanism for holding a positional relation between said second polarization means and said polarization direction

converting means, wherein said second polarization means is 180 degree horizontally rotatable so as to position said second half-wave plate facing said second segment," as recited in claim 1.

Therefore, claim 1 patentably distinguishes over Rosencwaig.

Claims 3 and 5-14 depend from claim 1 and are allowable for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 1, 3 and 5-14 is respectfully requested.

Claim 15, as amended, recites:

A position holding mechanism, for use with a three-dimensional image display comprising at least first and second polarization means and polarization direction converting means, for holding a positional relation between said second polarization means and said polarization direction converting means, wherein said positional relation is adjustable, and wherein the three-dimensional image display device comprises:

an image display portion for displaying image information according to a parallax separately in a first segment and a second segment;

said first polarization means for polarizing lights from said first and second segments, facing said image display portion;

said polarization direction converting means provided so as to face at least said first segment of said image display portion for converting a polarization direction of polarized light of said image information from said first segment into a direction different from a polarization direction of polarized light of said image information from said second segment, wherein a portion of said polarization direction converting means facing said first segment comprises a wave plate filter including a first half-wave plate which rotates said polarization direction of polarized light of said image information from said first segment by 90 degree;

said second polarization means having a first polarization plate portion and a second polarization plate portion to which polarized lights separated by said polarization direction converting means are respectively input, said first polarization plate portion for viewing with one of right and left eyes, said second polarization plate portion for viewing with the other one of the right and the left eyes, said first polarization plate portion having a polarization direction so as to output said polarized light of said image information from said first segment, and said second polarization plate portion having a polarization direction so as to output said polarized light of said image information from said second segment; and

a second half-wave plate provided over one of said first and second polarization plate portions of said second polarization means so as to face said first half-wave plate of said polarization direction converting means to rotate said polarization direction of said polarized light of said image information from said second segment by 90 degree, wherein said polarization direction of said polarized light of said image information from said second segment is the same as said polarization direction of polarized light passed through said second half-wave plate

and said second polarization plate portion, *wherein said second polarization means is 180 degree horizontally rotatable so as to position said second half-wave plate facing said second segment.*
(Emphasis added).

Rosencwaig neither discloses nor suggests “a position holding mechanism, for use with a three-dimensional image display comprising at least first and second polarization means and polarization direction converting means, for holding a positional relation between said second polarization means and said polarization direction converting means, wherein said positional relation is adjustable, and wherein the three-dimensional image display device comprises: an image display portion for displaying image information according to a parallax separately in a first segment and a second segment; said first polarization means for polarizing lights from said first and second segments, facing said image display portion; said polarization direction converting means provided so as to face at least said first segment of said image display portion for converting a polarization direction of polarized light of said image information from said first segment into a direction different from a polarization direction of polarized light of said image information from said second segment, wherein a portion of said polarization direction converting means facing said first segment comprises a wave plate filter including a first half-wave plate which rotates said polarization direction of polarized light of said image information from said first segment by 90 degree; said second polarization means having a first polarization plate portion and a second polarization plate portion to which polarized lights separated by said polarization direction converting means are respectively input, said first polarization plate portion for viewing with one of right and left eyes, said second polarization plate portion for viewing with the other one of the right and the left eyes, said first polarization plate portion having a polarization direction so as to output said polarized light of said image information from said first segment, and said second polarization plate portion having a polarization direction so as to output said polarized light of said image information from said second segment; and a second half-wave plate provided over one of said first and second polarization plate portions of said second polarization means so as to face said first half-wave plate of said polarization direction converting means to rotate said polarization direction of said polarized light of said image information from said second segment by 90 degree, wherein said polarization direction of said polarized light of said image information from said second segment is the same as said polarization direction of polarized light passed though said second half-wave plate

and said second polarization plate portion, wherein said second polarization means is 180 degree horizontally rotatable so as to position said second half-wave plate facing said second segment,” as recited in claim 15.

Therefore, claim 15 patentably distinguishes over Rosencwaig.

Claims 18 and 20-29 depend from claim 15 and are allowable for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 15, 18 and 20-29 is respectfully requested.

Claim 30, as amended, recites;

Polarization means comprising:

a polarization plate comprising a first polarization plate portion and a second polarization plate portion, wherein

said first and second polarization plate portions are input polarized lights separated by polarization direction converting means, respectively, and

said polarization means is mounted to a position holding mechanism for holding the positional relation between said polarization means and said polarization direction converting means, wherein said positional relation is adjustable,

wherein said polarization means is for use with a three-dimensional image display device comprising:

an image display portion for displaying image information according to a parallax separately in a first segment and a second segment;

said polarization direction converting means provided so as to face at least said first segment of said image display portion for converting a polarization direction of polarized light of said image information from said first segment into a direction different from a polarization direction of polarized light of said image information from said second segment, wherein a portion of said polarization direction converting means facing said first segment comprises a wave plate filter including a first half-wave plate which rotates said polarization direction of said polarized light of said image information from said first segment by 90 degree;

said first polarization plate portion for viewing with one of right and left eyes, said second polarization plate portion for viewing with the other one of the right and the left eyes, said first polarization plate portion having a polarization direction so as to output said polarized light of said image information from said first segment, and said second polarization plate portion having a polarization direction so as to output said polarized light of said image information from said second segment; and

a second half-wave plate provided over one of said first and second polarization plate portions of said polarization means so as to face said first half-wave plate of said polarization direction converting means to rotate said polarization direction of said polarized light of said image information from said second segment by 90 degree, wherein said polarization direction of said polarized light of said image information from said second segment is the same as said polarization direction of polarized light passed through said second half-wave plate and said second polarization plate portion, *wherein said polarization means is 180 degree*

horizontally rotatable so as to position said second half-wave plate facing said second segment.
(Emphasis added).

Rosencwaig neither discloses nor suggests “polarization means comprising: a polarization plate comprising a first polarization plate portion and a second polarization plate portion, wherein said first and second polarization plate portions are input polarized lights separated by polarization direction converting means, respectively, and said polarization means is mounted to a position holding mechanism for holding the positional relation between said polarization means and said polarization direction converting means, wherein said positional relation is adjustable, wherein said polarization means is for use with a three-dimensional image display device comprising: an image display portion for displaying image information according to a parallax separately in a first segment and a second segment; said polarization direction converting means provided so as to face at least said first segment of said image display portion for converting a polarization direction of polarized light of said image information from said first segment into a direction different from a polarization direction of polarized light of said image information from said second segment, wherein a portion of said polarization direction converting means facing said first segment comprises a wave plate filter including a first half-wave plate which rotates said polarization direction of said polarized light of said image information from said first segment by 90 degree; said first polarization plate portion for viewing with one of right and left eyes, said second polarization plate portion for viewing with the other one of the right and the left eyes, said first polarization plate portion having a polarization direction so as to output said polarized light of said image information from said first segment, and said second polarization plate portion having a polarization direction so as to output said polarized light of said image information from said second segment; and a second half-wave plate provided over one of said first and second polarization plate portions of said polarization means so as to face said first half-wave plate of said polarization direction converting means to rotate said polarization direction of said polarized light of said image information from said second segment by 90 degree, wherein said polarization direction of said polarized light of said image information from said second segment is the same as said polarization direction of polarized light passed through said second half-wave plate and said second polarization plate portion, wherein said polarization means is 180 degree horizontally rotatable so as to position said second half-wave plate facing said second segment,” as recited in claim 30.

Therefore, claim 30 patentably distinguishes over Rosencwaig.

Claims 33 and 35-42 depend from claim 30 and are allowable for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 30, 33 and 35-42 is respectfully requested.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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Respectfully submitted,

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